

**From the Chief Medical Officer
Dr Michael McBride**



Department of
Health

An Roinn Sláinte

Mánnystrie O Poustie

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HSS(MD)45/2020

FOR ACTION

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Castle Buildings
Stormont Estate
BELFAST
BT4 3SQ

Tel: 028 9052 0563

Email: Michael.McBride@health-ni.gov.uk

Our Ref: HSS(MD45)/2020

Date: 13 June 2020

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Dear Colleagues

**HSS(MD)45/2020 - CARDIOPULMONARY RESUSCITATION (CPR), AS AN
AEROSOL GENERATING PROCEDURE (AGP)**

This letter is to clarify the position, following the publication on 24 April of the evidence review undertaken by the New and Emerging Respiratory Virus Technical Advisory Group (NERVTAG). NERVTAG was asked to consider whether chest compressions and defibrillation are associated with an increased risk of transmission of acute respiratory infections. Furthermore, it was asked to give an opinion on whether chest compressions and defibrillation should be considered to be aerosol generating procedures (AGPs).

[NERVTAG POSITION STATEMENT](#)

NERVTAG's findings were

The scientific evidence base is extremely weak and heavily confounded by an inability to separate out specific procedures performed as part of CPR, e.g. chest compression, defibrillation, manual ventilation and intubation.

NERVTAG also states that whilst it is biologically plausible that chest compressions could generate an aerosol, this is only in the same way that an exhalation breath would do. An expiration breath, much like a cough, is not currently recognised as a high-risk event or an AGP.

Defibrillation is not likely to cause any significant breath exhalation. Airway intubation and manual ventilation consistently come out as the most high-risk procedures that take place during CPR.

In summary, NERVTAG concluded that it does **not consider** that the evidence supports chest compressions or defibrillation being procedures that are associated with a significantly increased risk of transmission of acute respiratory infections.

PHE's Position Statement on CPR as an AGP

Colleagues will be aware of the applicability of [PHE guidance on PPE](#) in the context of Covid-19 in Northern Ireland through previous communications.

PHE have provided [a position statement on the NERVTAG consensus statement](#). As well as restating NERVTAG's conclusions, they state that,

Healthcare organisations may choose to advise their clinical staff to wear FFP3 respirators, gowns, eye protection and gloves when performing chest compressions but we strongly advise that there is no potential delay in delivering this life saving intervention. [Table 4](#) in the revised PPE guidance recommends clinicians wear PPE during sessions in all settings when they assume there is widespread transmission in the community.

It should be noted that at present, community transmission of COVID-19 is considered to be at a low level within NI, with positive tests and hospital admissions in single or low double figures daily.

CPR in clinical and community settings.

Consistent with NERVTAG's assessment and given the difficulty in disaggregating the different clinical elements of the resuscitation process, CPR within a hospital setting should be considered as a continuum which is likely to include an AGP as part of airway management.

In this case, the healthcare professional should make **a professional judgement** about whether to apply airborne precautions; which would include FFP3 face mask, long-sleeved gown, gloves and eye/face protection. Organisations should support clinical staff when making these judgements and ensure suitable PPE is available. However, as emphasised by PHE and NERVTAG, clinicians should also consider any harm to patients brought about by delay in administering life-saving procedures.

The NI Ambulance Service, similarly to hospitals, within this setting, is also a likely application of advanced airway management as part of the CPR continuum. Therefore the paramedic should **make a professional judgement** about whether to apply airborne precautions; this would include FFP3 face mask, long-sleeved gown or coveralls, gloves and eye protection.

First responders (not in a hospital setting – see definition in the [COVID-19: guidance for first responders](#)) – where chest compressions and early defibrillation are the likely outcome (rather than advanced airway management which

would be undertaken by a paramedic or other trained clinician), a fluid resistant surgical facemask, disposal apron, gloves and eye protection should be worn where appropriate, in line with Table 4 of the UK PPE guidance.

Out of Hospital Cardiac Arrest – where chest compressions and early defibrillation are the likely outcome (rather than advanced airway management which would be undertaken by a paramedic or other trained clinician), a fluid resistant surgical facemask, disposal apron, gloves and eye protection should be worn where appropriate, in line with Table 4 of the UK PPE guidance.

Where PPE is not available, the [Resuscitation Council UK \(RCUK\) has provided advice](#) for this as below:

“If there is a perceived risk of infection, rescuers should place a cloth/towel over the victim’s mouth and nose and attempt compression only CPR and early defibrillation until the ambulance (or advanced care team) arrive.”

Further Resuscitation Council advice and a statement for healthcare workers in primary and community healthcare settings, including an infographic, are available [here](#).

We trust this information is helpful and will facilitate clinicians in making pragmatic evidence based judgments when conducting cardiopulmonary resuscitation. Once more we would like to express our gratitude to colleagues who continue to provide exemplary care in the current challenging circumstances.

Yours sincerely



DR MICHAEL McBRIDE
Chief Medical Officer



PROFESSOR CHARLOTTE McARDLE
Chief Nursing Officer

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